

REMARKS

In response to the Official Action dated March 13, 2003, Applicant amends the application and requests reconsideration. In the Amendment, claims 1 and 10 have been amended, and claims 2-7, 11 and 12 have been cancelled. No new matter has been added. Claims 1 and 8-10 are now pending and under examination.

The claims were rejected as anticipated by, or obvious in view of, various references and combinations thereof. These rejections are rendered moot by the cancellation of claims 2-7, 11 and 12 and the amendments to claims 1 and 10.

Applicant respectfully submits that the amended claims 1 and 8-10 are patentable over the cited references or the cited combinations thereof. Independent claims 1 and 10 each recite a pleated filter medium, a lateral recess that is a folded pocket formed by an enlarged distance between adjacent folds, and an end plate that has a notch aligned with the lateral recess of the filter medium. These features of the claimed invention are not taught or suggested by the cited references or the cited combinations thereof.

Regarding US Patent 6,358,422 (Smith), a permeable material (132) is used to separate impurities from liquids. The permeable material (132) is arranged between two end plates (134, 136), and a transducer (152) is placed in the permeable material. The transducer measures the saturation of the permeable material with hydrocarbons. The permeable material is not pleated and does not have a folded pocket formed by an enlarged distance between adjacent pleat folds. Additionally, the transducer of Smith is not placed in the folded pocket formed by the enlarged distance between adjacent pleat folds. Furthermore, the end plates don't have notches aligned with the folded pocket formed by the enlarged distance between adjacent folds.

Unlike the claimed invention which allows for the replacement of the filter element or the transducer, Smith does not allow for replacing the transducer or for replacing the permeable material without replacing the transducer, since the transducer is embedded in the permeable material and a circumferential cover (104) closes off the permeable material laterally.

In US Patent 5,520,800 (Glebovsky) an annular filter element is disclosed which has a pleated filter element (9) disposed between two end plates. Aluminum rods (8) with alkaline coating are disposed between adjacent folds of the filter medium. Thus the aluminum rods (8) lie in the axial direction between the end plates. The aluminum rods are arranged uniformly in the circumference so that the fluid can flow uniformly along the surface. The purpose of the aluminum rods (8) with alkaline coating is to neutralize the acids in the fluid.

Glebovsky, however, does not disclose end plates having notches. Neither does it disclose notches that are aligned with the folded pocket formed by the enlarged distance between adjacent folds.

US Patent 2,049,530 (Eweyk) only discloses a water softener with water softener medium (24) disposed in a cylindrical housing. Therefore, Eweyk does not even disclose a filter, let alone a pleated filter medium having a lateral recess that is a folded pocket formed by an enlarged distance between adjacent folds, or an end plate that has a notch aligned with the lateral recess of the filter medium.

Regarding the combinations of the references cited in the rejections of the claimed invention, Applicant would like to offer the following comments.

The combination of Smith and Janke. To check the absorptive capacity of the filter medium Smith uses a sensor (162) which can check water level. In Smith, this sensor is integrated into the filter medium and constitutes a fixed component of the filter medium. In case of maintenance it is impossible, or possible only with great difficulty, to replace the filter medium without simultaneously changing the sensor. Since the filter medium is a volume in space, it does not suggest any redesigning of the filter medium.

In US Patent 5,234,601 (Janke) the filter medium consisting of granules (14) is held in a container (12).

Since no pleated filter medium is present in the combination of Smith and Janke, a person skilled in the art cannot be expected to use features of a pleated filter medium of the amended claim 1 as a pocketed opening for an additional functional component.

The combination of Glebovsky and Okada. Glebovsky discloses a pleated filter medium, in which the spaces between pleat pockets are used to accommodate aluminum rods with alkaline coating. In order to make use of the spaces between pleat pockets, Patent EP 0 754 483 (Okada) is cited, in which a pleated filter element is arranged around a core (110) in the embodiment in Fig. 13. This combination of references, however, does not teach or suggest an end plates that have notches aligned with the lateral recess of the filter medium.

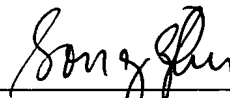
Applicants are therefore of the opinion that the amended claims are patentable over the cited references and combinations thereof.

In light of the foregoing remarks, this application is considered to be in condition for allowance, and early passage of this case to issue is respectfully requested. If there are any questions regarding this amendment or the application in general, a telephone call to the undersigned would be appreciated since this should expedite the prosecution of the application for all concerned.

If necessary to effect a timely response, this paper should be considered as a petition for an Extension of Time sufficient to effect a timely response, and please charge any deficiency in fees or credit any overpayments to Deposit Account No. 05-1323 (Docket #178/50052).

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Respectfully submitted,



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